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Nombre del trabajo: PROBLEMARIO

Materia: ALGEBRA

Grado: Primer Semestre

Grupo: BEN01

$$1. (-4x)(5x^3y^3)(-2x^2y)$$

$$-15x^4y^3 + 8x^3y$$

$$2. (-2A^3BC)(-4A^2B^2C^2)(5ABC)(-6AB^2)$$

$$+ 8A^5B^3C^3 - 10A^4B^2C^2 + 12A^4B^3C$$

$$3. -(3A^3 + 5B^2 - 4)(3A)$$

$$3A^4 + 15AB^2 - 12A$$

$$4. -\left(\frac{2}{3}A^3B^2 - \frac{1}{4}A^2B^3 + \frac{5}{6}AB^4 - \frac{2}{3}B^5\right)\left(-\frac{1}{2}AB^3\right)$$

$$= \frac{2}{6}A^4B^5 + \frac{1}{8}A^3B^5 - \frac{5}{12}A^2B^6 + \frac{2}{10}AB^7$$

$$5. (x^4 - 2x^3 - 11x^2 + 30x - 20)(x^2 + 3x - 2)$$

$$\begin{array}{r} 1x^6 - 2x^5 - 11x^4 + 30x^3 - 20x^2 \\ + 3x^5 - 6x^4 - 33x^3 + 90x^2 - 60x \\ - 2x^4 + 4x^3 + 22x^2 - 60x + 40 \\ \hline 1x^6 + 2x^5 + 19x^4 - 1x^3 + 92x^2 + 120x + 40 \end{array}$$

$$6.- (x^6 + 5x^4 + 3x^2 - 2x)(x^2 - x + 3)$$

$$\begin{array}{r} 1x^8 + 5x^6 + 3x^4 - 2x^3 \\ + 3x^6 + 15x^4 - 4x^3 - 1x^7 - 5x^5 + 2x^2 \\ + 9x^2 - 6x \end{array}$$

$$1x^8 + 8x^6 + 18x^4 - 6x^3 - 1x^7 - 5x^5 + 11x^2 - 6x$$

$$7.- (2x^4 - 2x^3 + 3x^2 + 5x + 10)(x + 2)$$

$$\begin{array}{r} 2x^5 - 2x^4 + 3x^3 + 5x^2 + 10x \\ + 4x^4 - 4x^3 + 6x^2 + 10x + 20 \end{array}$$

$$2x^5 + 2x^4 - 1x^3 + 11x^2 + 20x + 20$$

$$8.- (a^2 + 2b)^3$$

$$(a^2 + 2b)(a^2 + 2b)(a^2 + 2b)$$

$$\begin{array}{r} a^6 + 2a^2b \\ + 2a^2b + 4b^2 \\ + 2a^2b + 4b^2 \\ \hline a^6 + 6a^2b + 8b^2 \end{array}$$

$$9.- (5x^3 + 3y^2 - 4xy)^2$$

$$(5x^3 + 3y^2 - 4xy)(5x^3 + 3y^2 - 4xy)$$

$$\begin{array}{r} 25x^6 + 15x^3y^2 - 20x^4y \\ + 15x^3y^2 - 20x^4y + 9y^4 - 12xy^2 \\ - 20x^4y - 12xy^2 + 16x^2y \end{array}$$

$$25x^6 + 30x^3y^2 - 40x^4y + 9y^4 - 12xy^2 - 12x^3y + 16x^2y$$

$$10.- \left(\frac{1}{5}x + \frac{2}{3}\right)^3$$

$$\left(\frac{1}{5}x + \frac{2}{3}\right) \left(\frac{1}{5}x + \frac{2}{3}\right) \left(\frac{1}{5}x + \frac{2}{3}\right)$$

$$\frac{1}{25}x^2 + \frac{2}{15}$$

$$\frac{1}{25}x^2 + \frac{2}{15}$$

$$\frac{1}{25}x^2 + \frac{2}{15}$$

$$\frac{13}{75} + \frac{2}{15} = 1$$

$$\frac{2}{15} + \frac{2}{15} = \frac{4}{15}$$

$$\frac{60}{225} + \frac{2}{15} = \frac{400}{450} = \frac{8}{9}$$

$$\frac{63}{225} + \frac{2}{15} = \frac{63}{225} + \frac{30}{225} = \frac{93}{225} = \frac{31}{75}$$

$$\frac{63}{225} + \frac{2}{15} = \frac{63}{225} + \frac{30}{225} = \frac{93}{225} = \frac{31}{75}$$

$$\frac{20}{225} + \frac{30}{225} = \frac{50}{225} = \frac{2}{9}$$

$$\frac{60}{225} + \frac{2}{15} = \frac{400}{450} = \frac{8}{9}$$

$$\frac{63}{225} + \frac{2}{15} = \frac{63}{225} + \frac{30}{225} = \frac{93}{225} = \frac{31}{75}$$

$$\frac{63}{225} + \frac{2}{15} = \frac{63}{225} + \frac{30}{225} = \frac{93}{225} = \frac{31}{75}$$

$$\frac{15}{225} + \frac{50}{225} = \frac{65}{225} = \frac{13}{45}$$

$$\frac{63}{225} + \frac{2}{15} = \frac{63}{225} + \frac{30}{225} = \frac{93}{225} = \frac{31}{75}$$

$$\frac{63}{225} + \frac{2}{15} = \frac{63}{225} + \frac{30}{225} = \frac{93}{225} = \frac{31}{75}$$

$$\frac{63}{225} + \frac{2}{15} = \frac{63}{225} + \frac{30}{225} = \frac{93}{225} = \frac{31}{75}$$

mead.

$$11. - (4x^3y - 2z)^3$$

$$(4x^3y - 2z)(4x^3y - 2z)(4x^3y - 2z)$$

$$16x^6y - 8x^3yz$$

$$16x^6y - 8x^3yz$$

$$+ 8x^3yz + 4z^2$$

$$32x^6y - 24x^3yz + 4z^2$$

$$12. - (5/2 a^2 - 4/3 b^3)^3$$

$$\left(\frac{5}{2} a^2 - \frac{4}{3} b^3\right) \left(\frac{5}{2} a^2 - \frac{4}{3} b^3\right) \left(\frac{5}{2} a^2 - \frac{4}{3} b^3\right)$$

$$\frac{25}{4} a^4 - \frac{16}{3} b^6$$

$$\frac{25}{4} - \frac{16}{9}$$

$$\frac{5}{4} - \frac{4}{3}$$